

### REMARKS

The Examiner is thanked for the Office Action of May 29, 2008 and interview on October 23, 2008. This request for reconsideration is intended to be fully responsive thereto.

### AMENDMENTS TO CLAIMS

Claims 1 and 8 were amended as stated below. The title portion of Claims 1 and 8 were amended according to the discussion in the interview took place on October 23, 2008. Rest of the amendments was to mainly clarify the limitations and differences from the cited reference, which are clearly supported by the original specification, drawings, and claims. No new matter has been added.

### REJECTIONS UNDER 35 U.S.C. 101

Claims 1 and 8 were rejected under 35 U.S.C. 101 because the claimed invention was directed to non-statutory subject matter. The language of Claims 1 and 8 in question were amended to remove the 101 rejection according to the discussion in the interview on October 23, 2008. Now, the title portion of Claims 1 and 8 reads, "[a] computer system comprising a processor and a data storage space". Therefore, the rejection under 35 U.S.C. 101 should be removed. No new matter has been added.

### REJECTIONS UNDER 35 U.S.C. 103

Claims 1 and 8 were rejected under 35 USC 103(a) as being unpatentable over US Patent Publication No. 2001/0011321A1 to Tamatsu (Tamatsu) in view of US Patent Publication No. 2003/0158842A1 to Levy et al. (Levy) and further in view of US Patent Publication No. 2003/0013445A1 to Fujiwawa et al (Fujiwara).

Basically, in this rejection, the Examiner stated that Tamatsu disclose all elements except for the primary system and the transmission of the information of the modification in the location table and communication mechanism; however, Levy and Fujiwara in combination of Tamatsu makes Claims 1 and 8 obvious.

However, as we discussed in the interview, Tamatsu is the invention regarding the primary system. It discloses the fundamental structure of the primary system only. However, this application relates to the accelerator system and Tamatsu as well as Levy and Fujiwawa are silent as to the accelerator system. More specifically, Claims 1 and 8 after amendments read:

Claim 1: A computer system comprising a processor and a data storage space, containing a database accelerator that is comprised of: a primary system that holds data records having data items including primary keys, said primary system includes: primary blocks that store the data records in the order of their primary keys, and a location table that is positioned in a contiguous region and contains location table entries where said location table entries contain addresses of at least one primary block, any modification to the location table, due to data addition, update, and deletion causing a data modification within the block, causes said primary system to transmit information of a location of any modification in the location table and a content of modification to an accelerator system; and an accelerator system that has a frond location table holding contiguous frond location table entries indicating the blocks that are identical to the location table entries

of each primary block, said accelerator system has: a communication mechanism, if any modification occurs to the location table due to the location table due to the data addition, update, and deletion causing data modification within the block, then the communication mechanism receives the modification information from the primary system, and a modification information application mechanism that performs necessary updating based on the modification information transmitted from the primary system, and retrieval mechanism using the primary key  $pk$  in said accelerator system where the accelerator system frond location table is used to perform a binary search to retrieve the frond location table entries with a target key value to determine an object block and that retrieval relative to the record within the block is performed relative to the primary block or overflow block in the primary system.

Claim 8: A computer system comprising a processor and a data storage, containing a database accelerator, that is comprised of: a primary system that holds data having data items including primary keys and alternate keys, primary blocks that store the data records in the order of their primary keys, alternate key blocks that stores the alternate-key entries made up of alternate keys and primary keys in the alternate-key value order, and an alternate-key location table that contains the alternate-key location table entry in a contiguous region, if the alternate-key location

table is modified as the alternate-key entry within the alternate-key block is modified in the case that alternate-key modification occurs due to data addition, update, and deletion causing a data modification within the block, then said primary system transmits information of a location of any modification in the alternate-key location table such as alternate-key location table entry number and a content of modification to an accelerator system; and an accelerator system that has: a communication mechanism, where if any modification occurs to the alternate-key location table due to data addition, update, and deletion causing data modification within the alternate-key block, then the communication mechanism receives the modification information from the primary system and a modification information application mechanism that performs necessary updating based on the modification information transmitted from the primary system, and retrieval using the alternate-key in said accelerator system is such that the accelerator system frond alternate key location table is used to perform a binary search to retrieve the frond alternate-key location table entries with a target key value to determine an object alternate-key block and that retrieval relative to the record within the alternate-key block is performed relative to the alternate-key block in the primary system.

No cited reference discloses, teaches, or suggests the above limitations. Therefore, the Examiner is respectfully requested to withdraw the rejection under 35

U.S.C. 103.

CONCLUSION

It is respectfully submitted Claims 1 and 8 are now in condition for allowance and notice to that effect is respectfully requested. Should the Examiner believe further discussion regarding the above claim language would expedite prosecution they are invited to contact the undersigned at the number listed below.

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